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ABSTRACT

As more emphasis is placed upon institutional research that provides information relating to long-term strategic planning, as well as to short-term operational considerations, program evaluation techniques that merely analyze past or current budget and enrollment statistics will become increasingly inadequate. Such techniques are based on data systems designed to produce program review reports required by public agencies and governing boards. As such, they provide figures relating to program input, process, output, and outcome variables that are of little help in the long-range planning process. To correct this situation, institutional researchers should incorporate measures now evident in enrollment projection formulas to provide a prognosis model whereby educational programs are judged in light of institutional missions. This will involve the collection of data relating to topics such as the number of future jobs in a given industry, the plans of local employers to expand or reduce plant activities and/or capacity, and the future economic effects of Federal Research System actions to restrict credit. By incorporating these prognostic data into evaluation procedures, institutional researchers will help decision-makers allocate college resources more adequately to meet changing educational needs. (JP)

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PROGRAM EVALUATION FOR STRATEGIC PLANNING
IN THE TWO YEAR COLLEGE

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Program Evaluation for Strategic Planning
in the Two Year College

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The financially turbulent 80's will force institutional researchers to emphasize program evaluation data that relates to overall institutional strategic planning activities. Many institutions now possess and operate program evaluation systems that fit into the one or two year planning cycles of college middle management. Much of the present collection and reporting of data involve the generation of statistics that have little relevance to the executive officers for formulating long-range policies and action strategies. Variables that are being added to enrollment projection models point the way to the type of data that will be requested in the near future.

PROGRAM EVALUATION FOR STRATEGIC PLANNING
IN THE TWO YEAR COLLEGE

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As community colleges and other two year institutions move into the financially turbulent 80's, increasing emphasis will be placed upon institutional researchers to produce data that relates to strategic planning as well as the ever present needs for tactical planning. Many institutions currently have evaluation plans or designs for programmatic needs that fit into an operational tactical planning mode. Many of these plans or designs involve little more than a systematized program review document. While these kinds of evaluations serve a necessary and useful role for the middle management of an institution, it is becoming evident that the top executives in the colleges need to plan much further down the road than many have had to in the past (Lounsbury, et. al., 1979). College planners, be they the president or an office of planning, need to take the future into account in terms of market forces, economic health of the community, state, or regional planning directions for higher education, community perceptions of the institution (i.e., the "market" the community believes the institution serves), future state funding directions, etc. Program evaluation will have to respond to these executive needs by addressing the strategic concerns at the same time statistics generation for operational decision making is reported. Some institutions will want to incorporate both into one document, while others will split the "audience" into two separate groups with two different reports.

The objective of such a strategic evaluation will be to place educational programs within the overall planning strategy of the

institution. When college executives must decide between programs for existing funds, or decide whether or not to enter a new market and drop a program that appears to be waning in FTE, that decision should be made within the overall framework of an institutional strategic plan. Making decisions to keep or retain a program should not be made solely on tactical "management statistics," such as FTE.

Operational Planning Evaluation

Many institutional evaluation plans are essentially plans driven by program review documents requested by funding agencies. Another contributor to the program review slant of evaluation documents is the need for decision makers within an organization to make decisions on what are termed "relevant" statistics. This particular type of operational evaluation document can be termed the single sheet mentality. Under the pressure of the budget crunch that many two-year colleges are now experiencing, and will undoubtedly experience to a greater degree in the 1980's, many decision makers are looking to make hard decisions that can be justified within a cost-effectiveness model. This type of evaluation document will frequently contain such breakouts as input variables, process variables, output variables, and outcome variables, content variables, contextual variables, etc. These variable names will change from institution to institution but the statistics generated tend to appear across institutions.

The so-called input phase will request a graph or table specifying the FTE enrollment in a particular program over the past five- to ten-year history. Another common variable is the number of full-time instructional staff and part-time instructional staff. Some institutions

will actually put estimates or projections on future FTE enrollments and full-time staffing requirements on the same historical graph.

Process variables frequently involve such statistics as the student/faculty ratio (again in an historical perspective) and program changers. This is essentially a statistic that tries to describe what is happening to students within a given program. Another term to describe this would be an attrition variable.

Output variables are frequently described with statistics such as program completion ratios (the percentage of students who complete a program upon entering it). Another common statistic is cost per student credit hour generated within the program. This is an extremely important statistic in many operational planning models.

Examples of outcome statistics could be such things as the number of graduates a program produces and the success in job placement (generally broken down into job-related and non-related jobs). Other institutions also can generate a statistic such as cost per FTE within a program as an output statistic.

All institutional researchers have noted that their large and voluminous reports are frequently sent back with a request to produce a brief document that summarizes it. This request will usually ask the evaluator to reduce it to one to three pages. As a result, statistics that relate to funding formulas, soft funds, hard funds, and capital expenses, etc., are pulled out for highlighting in the summaries. The net effect is the decisions are made on the basis of a few sheets of paper. This can be a very effective way of conducting operational control of programs in a given fiscal year.

It is quite common in institutions that practice this type of evaluation model for faculty to remark that the evaluations do not do their programs justice. Many institutions have attempted to meet this criticism by adding variables describing criteria that can summarize the program in greater detail but frequently with no resultant reduction in the faculty acceptance of the decision.

Examples of input variables could be FTE student enrollment and percent change from previous years; number of program majors; number of instructional staff; number, level of education, field of education, licensure or certification, professional development and practical experience of full-time faculty; average full-time faculty salary; number of students enrolled in the program by full-time and part-time status; number of square feet of space dedicated to the program; replacement value of program equipment; proportion of technical, related, and general education credit hours in the curriculum; degree to which job performance skills are reinforced in the curriculum. Many institutions have generated statistics of similar genre for their in-house plans.

Examples of process variables could be: student/faculty ratio and percent change from previous years; percent of students who changed their program major out of the program; percentage of class enrollments in each grade category; number of courses/sections cancelled per quarter and number of students displaced; portion of lecture credit hours to cooperative/field/clinical/laboratory credit hours; cost of providing clinical, individualized, and field experiences.

Examples of output criteria could be: number of program completers; cost per credit hour; number of program graduates and percent changes

from previous years; proportion of program completers (and level of completion related to educational objectives) to program leavers and percent change from previous years; percent of non-completed student credit hours; percent of entering students who ultimately graduate; percent of graduates of selective admissions programs versus percent of graduates of open enrollment programs.

Examples of outcome criteria can be: percent of graduates placed within three to six months in their occupational/technical area; student satisfaction with vocational preparation; employment in field related to training; job retention offers; average entry salary of program graduates; salary levels after three years on the job; employer satisfaction with job performance; percent of available positions filled by college graduates; percent of annual labor market need met by program placement.

It is not the intent of this author to imply that all of the above criteria are necessarily just operational in intent. Several of the variables can fit into strategic planning criteria. The point remains that even with large reports, top management within educational institutions are starting to request small summaries that provide options or recommendations for action from the institutional researcher that are definitive and simple. Many of the so-called full-scale evaluation plans are, in actuality, reduced to program review documents in a decision-making process.

Another phenomenon taking place involves educational administrators attending management improvement seminars at local business schools. Some of these seminars are titled, "How to Push Back Data from Your MIS System." In a nutshell, what our educational administrators are doing are taking management courses which teach them to ignore most of

the data being produced by the evaluation and institutional researchers. The decision-maker frequently does not have the time to pore through an in-depth fifty-page report describing a particular program. Most executives are overwhelmed with paper even in the best of times. With the need to reduce programs and make tough financial decisions between competing programs within an institution, the paperwork seems to mushroom. Executives are stating to us that our evaluation documents are not giving them the information they need. It is frequently a mystery to educational researchers as to what they are actually asking for.

Evolution of Evaluation

It is entirely possible that institutions have to pass through an evolutionary process to achieve good strategic evaluation. Many two-year schools were overwhelmed by growth through the period of the 60's and 70's. Administrators and decision-makers were faced with the enviable tasks of finding more space for more students with more faculty. It appears that this rapid expansion period is now over. Many institutions have turned to full-scale program evaluations to help them deal with the new financial climate.

Since many two-year schools have waited to institute evaluation strategies and operations in a climate of tough decision making, it is frequently viewed as a punitive process by faculty. All evaluators know that the time to introduce evaluation is during a period of growth, when the evaluation is used as a means of helping to direct future growth. All concerned, generally, accept the evaluation component in that financial climate.

When the need for evaluation reaches a need level, the institutional research office is frequently requested to add the task of program evaluation onto their already large tasks of providing external reporting requirements. Many institutional researchers have spent years in developing a large data base from whence to satisfy external reporting requirements. Many institutions have to report to a board of regents or to a state funding agency or to a federal agency providing soft dollars. As well, many federal agencies require data analysis and presentation as part of ongoing HEW review. It is the contention of this paper that the data collected by most state and federal agencies does not serve the needs of institutional decision makers. The institutional research office, when faced with the request or provide evaluation data, took the perfectly rational approach of adding the evaluation system into the existing data base that they had created. This is especially true if the data base is housed within a large computer facility. In either event, the result is that evaluation documents tend to be based on data systems generated to produce program review reports. Evaluation was not built on a planning base. Many institutional researchers have been somewhat bemused by college executives now telling them that their wonderful, large reports filled with objective data are not satisfying the questions they have. The problem goes beyond any lack of statistical training of college executives and proposes that institutional researchers have contributed to the problem by failing to acquaint themselves with the type of questions that the college executive needs to have answered. It is quite probable that several college executives have been unable to communicate their needs to the institutional research office.

Strategic Evaluation

One probable outcome of these developments will be a need to reduce many of the innocuous statistics being collected in some evaluations of educational programs, e.g., percentage of grades in courses by departmental major, etc. These statistics, while masterpieces of computer analysis are probably being ignored in meaningful decision making already. With the increased demands on staff resources that result from real dollar cuts in many institutional research budgets, there will be pressure to discard them. Institutions will consider a list of key statistics for immediate operational management tasks and next year planning and scheduling. The emphasis will switch to analyses not necessarily dominated by numbers but more in line with "content or context" analyses (which are evaluations under a different name when applied to programmatic scopes). One of the ironies that will strike institutional researchers is that evaluation for strategic planning will may involve a move to more "soft" data bases; many researchers have spent years becoming "hard" data based for operational planning purposes.

Decision makers within an institution will have to examine whether or not retraining, sabbaticals, an in-house staff development effort, or bringing in a high priced consultant to assist faculty in revising a program to meet emerging community needs should be options that will have to be built into the institutional planning/budget process in order to achieve long-term payoffs for long-term goals. If a decision maker has to determine which "old" program will be dropped to make room for innovative (new) programs, he/she will want data and analyses that state more than the present condition of the program on budget statistics and variables.

Many weak programs should not be cut but should be extensively altered. Institutional researchers and evaluators should anticipate these questions and generate reports that do more than label the present health of programs. Reports will have to go beyond a simple diagnosis (suitably buttressed with a two foot high pile of computer paper stored in the basement) to a prognosis model whereby educational programs are judged in light of institutional missions.

Several of the new measure now appearing in enrollment projection formulas (Romoser, 1980) can play a role in answering the types of questions that institutional researchers will have to build into the design of their evaluation data collection activities. Data referring to topics such as: what will be the number of future jobs in an industry five years from now? will local employers expand or reduce current plant activity and capacity? will need for law enforcement training programs diminish as businesses located in high risk areas close out and open in less risky locations? will the actions of the federal reserve system to reduce credit in the economic system affect the community more than other areas within the state? Institutional researchers will have to anticipate the types of data that present and future executives involved in strategic planning will want to utilize. Many of these variables appear in evaluations plans in different institutions but eventually all institutions will begin demanding such information. To the extent that the research office can anticipate data requests, the task of tooling up the support systems necessary for such efforts can be made less painful.

The significance of this concept affects institutional health in a long term context. Any school can afford to make mistakes in planning when more students are arriving regardless of what actions are undertaken. But, The Chronicle lists weekly horror stories concerning the monstrous cost

pressure being felt by many areas of higher education, especially four year schools. While the two year schools are not expected to experience similar problems in the magnitude of the four year sector, it would be folly to assume they will escape unscathed. Institutional research directors who prepare for these new data demands (they can occur within thirty minutes of the Treasurer's report!) will minimize the strain on their operational units and cut the lead time necessary to develop the associated software from the management information system, which is probably computer based.

For many college presidents, the decision will be a hard choice of deciding whom or what will have to go in order to place resources within the institution to meet the new challenges. Institutional researchers have a professional interest in those decisions being made with appropriate and relevant data. Good strategic evaluation, within the overall context of an institutional plan, can plan for staff and faculty retraining before the student/faculty ratios become a disaster. Sufficient lead time can be given to faculty who might have to face relocation in order to continue their careers in teaching. Attrition will not produce planned results if there is no plan. Many institutions may want to set "target" staffing patterns that are aimed at five years hence in order to make program hiring and tenure decisions before options are closed by a myopia with next years staffing and class schedule building. It allows a hiring freeze to be proactive rather than an across the board reaction to alarming news from the budget office at midyear. Selected areas would be allowed to expand, while others would be targeted for reduction and the freeze applied early enough so that normal attrition will be able to assist executives in performing necessary staff reductions in a humane manner.

Developing a staffing plan six months after the hiring freeze in a large organization will most likely result in operational planning driving the strategic goals, e.g., since program b is already down by 3 out of four faculty we will close it rather than rebuild it and phase out program c that has 6 tenured faculty with an average age of 27. That example points to a lack of strategic planning and allows program review statistics to dictate planning options and future decision making. What if program b is data processing? or energy conservation technology?

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